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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, CHI HO A

ART UNIT PAPER NUMBER

2663

DATE MAILED: 02/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/714,621

Applicant(s)

CHOUNDHURY ET AL

Examiner

Andrew Lee

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 11 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) 1-3, 5-10 and 12-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 8-9, 12-17 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Elwalid et al U.S. Patent Number 6,353,616.

Re Claims 1, 12, 15, and 19, fig. 3 teaches a packet classifier 210 (identifying a predetermined control message) that monitors each packet to identify the type control messages (See col. 4, lines 68 ~ col. 5, lines 1-10); afterworth stores the identified control message type to their respective receive queues (storing each ...message queues); fig. 3 teaches in step 311 calculating weights for each message queues (assigning a weight to each queue); step 302 allocates processing capacity (processing the queued messages) to message classes for each queue (See col. 9, lines 30 +).

Re Claim 2, 3, 9, 13, 16 refer to Claim 1, further teaches a round-robin scheduler 206 for scheduling according to the adaptive weighting assignment (See col. 5, lines 15-30) wherein the scheduler 206 inherently includes the weighted polling table to enable to identify the particular queue to be processed wherein the entries in the polling table correspond to the a number of queue with its associated weights.

Re Claims 3, 14, 17 refer to Claim 2, since the Scheduler 206 perform round robin scheduling of the queues based on the assigned weight, the number of entries in the round robin table is a sum of the weights assigned to the queue queues to enable the scheduling of the received control message types, wherein the weights are defined based on link utilization for the message class and the average message queue length.

Re Claim 7, refer to Claim 1, wherein the packet classifier determines the message type based on the header information (a value in a packet header).

Re Claim 8, refer to Claim 1, fig. 3 step 302 allocates the processing capacity to each message classes (a maximum processing time).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 6, 10, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elwalid et al U.S. Patent Number 6,353,616.

Re Claims 5, 6, 10, 18, and 20, Elwalid teaches receiving and queuing RSVP protocol control messages but fails to explicitly teach that the control messages includes OSPF HELLO, LSA, and LSA acknowledgement, OSPF HELLO refresh, LSA refresh, and LSA retransmission message sent further nodes. It is known to one skilled that the link-state routing protocol (OSPF and PNNI) includes all of the above control messages. Hence, when the packet network of fig. 1 includes link-state routing protocol, the

scheduler 206 can be modified to include more weight queues distributing the processing capacity. By modifying Elwalid to link-state routing protocol control messages, the packet network of fig. 1 can be enable to calculate the least cost routing. Furthermore, by round robin weighted scheduling all control available control messages would enable each control messages to be adaptive to the link utilization and the average message queue length. Hence, one skilled in the art would have been motivated to modify the Elwalid to include link-state routing protocol messages into the weighted queues to be adaptive to changing condition of the link and queue length.

Allowable Subject Matter

5. Claims 4 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with Claims 1-4; Claims 9 and 11, prior art fails to positioning the entries in the round robin polling table so as to minimize a distance between multiple entries corresponding to the same message type queue

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 703-305-1500. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

AI
2/4/04



ANDY LEE
PATENT EXAMINER